THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888

No. 31. AUGUST 2, 1952 VOL. 64.

BOVINE LIPOMATOSIS

BY

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READING

The term lipomatosis signifies a diffuse overgrowth of fatty tissue, either local or general. The condition described here is the same as that referred to by Gaiger and Davies (1946) as the diffuse form of lipoma sometimes found in the abdominal cavities of cattle.

The condition of bovine lipomatosis would, from the sparcity of published reference on the subject, be thought to be one of little clinical significance. That cases are identified, usually at *post-mortem* examinations, or at routine inspections at abattoirs (McEwen, 1934) is well known, but the incidence of the condition is not readily apparent.

It would appear, therefore, that the condition has not been fully recognised as one of economic importance, neither has its apparent particular association with a specific breed been previously noted. No statistics are available as to the individual breed incidences of the condition, but from the seven cases here recorded, it would appear to be significant that this is a state affecting, predominantly, the high butter-fat breeds.

The condition would appear to be common to males as well as females, Case 7 being an example of one of two cases in Guernsey bulls, in one herd (Burrow, 1951). This breed and, to a lesser extent, the Jersey are well known for the high carotene content of the butter-fat, imparting to this product and to the carcase fat a deep, rich, yellow colour.

CASE 1. Examined April, 1947.

Subject.—Non-pedigree Guernsey cow in a commercial attested herd. Age eight years. Pregnant with her sixth calf. All previous parturitions had been normal. General bodily condition fair.

This case was observed at a routine rectal examination for pregnancy. The lesions felt consisted of several (about 10) hard masses, situated in the abdominal cavity, attached, apparently, to the mesentery and to the uterine investments. The lesions were all about 5 by 10 cm. in size, being at their greatest thickness about 2 cm. deep. Their individual shapes varied, but their surfaces were moulded to the convex surfaces of adjacent abdominal organs. The masses could be easily grasped, and differentiated from the uterus, which seemed normal in all respects for that of a six-month pregnancy. The foetus was viable.

Advice was given to pay particular attention at time of parturition in case the close association with the uterine investments might result in uterine inertia, or maternal dystokia.

This animal subsequently calved normally, at full term, a live heifer calf.

CASE 2. September, 1949, to April, 1950.

Subject.—Pedigree Guernsey cow in an attested pedigree herd. Age five years. This animal had produced only one calf. General bodily condition good.

This animal had been examined by a veterinary surgeon three months previously, and her condition had been diagnosed, and treated, as one of foetal mummification, a diagnosis which, from her history, might well be considered.

History.—The animal had been bought 12 months previously (*i.e.*, September, 1948) as being pregnant. Following the passing of the date of calving without any pre-parturient signs, a veterinary surgeon had examined the animal, and treatment was applied, unsuccessfully, to produce a supposedly mummified calf. When examined three months subsequent to this initial diagnosis, a careful exploration revealed the following. The cervix was patent, admitting one finger into the cervical canal, and a little muco-purulent discharge was present in the vagina. Rectally, a hard fibrous mass was felt in the position of the uterus, but was found to be extra-uterine, not, as had previously been supposed, intra-uterine. The animal was not pregnant, and showed no signs of having been in calf.

The most prominent lesion at this time was approximately 20 cm. long by 10 cm. wide. The mass was lying immediately below the rectum, and superior to the uterus, in the retro-peritoneal region. The dorsal aspect was slightly concave, moulding to the shape of the rectum. A diagnosis of lipomatosis was made.

Prognosis.—A poor prognosis was given as the fibro-lipoma appeared to involve the peritoneum intimately, and was investing the uterus and ovaries, both ovarian bursae being obliterated by adhesions.

Subsequent History.—In an endeavour to induce a lactation artificially, a stilboestrol implant (1 gramme) was deposited subcutaneously in the neck region. At the same time, the diet was increased. After six weeks, the implant was removed, and an examination *per rectum* at this time revealed that the main tumour mass was now only about half its original size, but much firmer in consistency, suggesting a contraction of some of the fat deposits. This was despite an increased nutritional level which included flaked maize and linseed cake. The "lactation" achieved amounted to only 2 pints daily, and consequently three weeks subsequent to the last examination the animal was slaughtered. In an endeavour to assess any abnormality in the fat metabolism, a cholesterol estimation was made of blood taken immediately prior to slaughter; this was found to be within the normal range.

Pathology.—The *post-mortem* examination revealed a number of large masses of fat tissue, resembling lipomata, within the abdominal cavity. The pathologist's report on the genitalia revealed the following state of affairs:—

The uterus was empty, the cotyledons being represented by slightly elevated areas. There was a little greyish opaque fluid on the uterine mucous membrane, but this, from smears and cultures, appeared to be sterile. There was a hydrosalpinx in the left fallopian tube; the dilated oviduct contained a clear fluid, and measured up to 0·7 mm. across; the right tube measured 0·25 mm.

Several of the lesions which were examined by the patho-

logist, which were typical of the many seen, were described as follows :—" Four large specimens of lesions of lipomatosis were examined. These measured 16 by 8, 5 by 3, 8 by 5, and 7·5 by 4 cm. respectively. The cut surface of these lesions showed lobules of fat, with areas of a fibrous nature, also reddish foci which, in section, appeared to correspond to fat necrosis. Two small encapsulated abscesses measuring 2·5 by 2 cm. approximately, were also present ; they contained a rather thick greenish pus which gave a mixed growth of gram-positive rods and cocci on culture ; the predominant organism appeared to be *Corynebacterium pyogenes*. No acid-fast organisms were seen in smears."

From the above pathological examination, it would appear that in older lesions areas of fat necrosis had developed. Following this necrosis, secondary infection of the necrosed areas occurred. The possibility of tuberculosis in this case was also eliminated bacteriologically.

The lesions of lipomatosis were confined to the abdominal cavity, the thoracic cavity and its contents being normal.

It is of interest in this case that during the period the stilboestrol implant was present the palpable lesion regressed, although the animal put on body fat. This decrease in size was not apparently due to fat necrosis, but to the withdrawal of fat from the lesion.

CASE 3. Examined April, 1950.

Subject.—Pedigree attested Guernsey cow. Age eight years. General bodily condition poor.

This animal was examined following a history of long-standing infertility. The examination revealed, in addition to a low-grade chronic metritis, a flattened lesion about 5 cm. in diameter, on the right dorsal aspect of the posterior retro-peritoneal region. The lesion was firm to the touch, and appeared to involve retro-peritoneal fat. It did not appear to be in any way connected with viscera, and it was not considered likely to affect adversely the breeding potentialities of the animal at this stage.

This animal was examined whilst it was in the same herd as the previous case.

CASE 4. Examined July, 1950.

Subject.—Friesian type animal, by a Friesian bull, out of a Guernsey cow. Age seven years. In an attested herd. General bodily condition very good. Her milk was of high butter-fat, being between 5 to 6·5 per cent. on various tests.

This case was brought to my attention by the owner, following an observation made by a lay-inseminator who experienced difficulty in locating the cervix by rectal palpation.

Rectal Examination.—This revealed extensive masses surrounding the posterior part of the rectum for about 20 cm. of its length. The lesion was concave on its dorsal aspect, fitting into the shape of the rectum, forming an almost complete " tunnel." Clinically, the lesions were typical of those of a lipomatosis. A blood cholesterol estimation was made, revealing a level of 280 mg. per cent.

Subsequent History.—This animal was examined for pregnancy at a later date, and found to be pregnant, although examination of the uterus was rendered extremely difficult by the large size and position of the lesion. This cow calved normally in March, 1951, a live bull calf.

CASE 5.

Subject.—Non-pedigree attested Guernsey house cow. Age six years. General condition fair.

This animal was first examined owing to her being in difficulties at parturition. A vaginal exploration was made, both hind legs of the calf being presented. Uterine contractions were poor and primary uterine inertia was suspected as the cause of the non-delivery. There were no symptoms of hypocalcaemia. A dead heifer calf was delivered by gentle traction, and the animal was cleansed manually. At this time it was noted that numerous hard lobular masses could be felt through the uterine wall, in the abdominal cavity. The case was tentatively diagnosed as one of fibro-lipomatosis, resulting in impaired uterine function. The information was elicited that the subject had been artificially inseminated three times, and finally served by a Guernsey bull before conception resulted.

The information was also volunteered that the animal was rarely seen to cud, although she seemed fit and well otherwise. Her milk had a very high butter-fat content. The subsequent post-parturient period was uneventful.

Four weeks after parturition it was reported that the animal was off her food, and her daily milk yield had fallen from 4 gallons to 3.

Examination revealed the following :—

Temperature 101·5° F. ; respirations normal ; absence of reticular or any localised pain. Rectal examination showed extensive fibro-lipomatosis, commencing approximately 20 cm. from the anus, and increasing in thickness as they extended forward until the rectum, about 50 cm. from the anus, was completely surrounded by a ring of tissue forming a " tunnel."

A diagnosis of gut impairment caused by the fibro-lipomatosis was made, and a doubtful prognosis was given.

Treatment was confined to parenteral administration of glucose and minerals (Ca, Mg and P) and a dietary and bowel stimulant *per os*.

Slight improvement was seen within 24 hours, and it was decided to attempt to continue milking the animal through her lactation, so long as her condition did not deteriorate.

Relapses occurred at 10 and 30 days later, and each time less response to treatment was seen. Slaughter was advised whilst bodily condition was still fair. The owner, however, preferred to continue milking the animal until June 22nd. The milk yield, which had been gradually falling, was down to only 5 pints, and the animal grazed only spasmodically. Finally, she was killed on June 27th, 1951.

This case is of interest, as it is one of the two of this series where definite and fairly long-standing impairment of gut function is recorded. Lipomatosis as a factor in dystokia was also seen, and in this case the condition would no doubt have finally caused the animal's death. It is surprising, considering the degree of involvement of the lower gut, that constipation was not a constant feature of this case. This may have been obviated by the animal's diet of fresh grass, and the lowered rate of fluid absorption from the gut contents, owing to the lesions around the colon.

Post-mortem *Examination.*—The carcase was in poor bodily condition, and there was little subcutaneous fat.

On opening the abdominal cavity, about 1 pint of clear serous peritoneal fluid escaped. The abdominal cavity contained a large amount of fat tissue, dark yellow in colour. The mesentery was interspersed with numerous small lesions of lipomatosis (1 to 3 cm. in diameter), which could be felt as firm nodules within the substance of the fat. The renal fat was similarly infiltrated. The lower portion of the alimentary tract was firmly encased in a hard fatty mass, completely fixing the greater part of the colon into one solid block, about 40 by 20 cm. A cross section of this mass was obtained for histological examination (see Fig. 1). Various other islands of active lipomatosis were located in the abdominal fat; one on the ventral surface had become firmly adherent to the peritoneum for an area about 8 cm. in diameter.

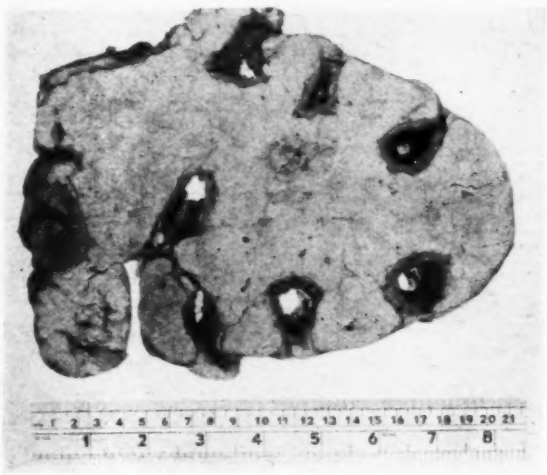

FIG. 1.

A metallic foreign body, apparently of recent acquisition, was found penetrating as far as the visceral surface of the cardiac lobe of the liver, producing on this organ a small area of inflammation, about 2 cm. in diameter. Otherwise the liver appeared normal and free from fatty degeneration or fatty infiltration. There were no organised adhesions round the reticular area, and it is probable that this foreign body produced the final complete period of inappetence, about four days prior to slaughter, which resulted in the owner's consent to this course.

The thoracic cavity was normal. There were no signs of fatty degeneration, or inflammation of the cardiac musculature, nor were there any signs of a pericarditis. The lesions of lipomatosis were therefore entirely confined to the abdominal cavity.

The spleen was not involved, and the kidneys appeared normal, although their associated fatty investments contained numerous nodules, suggesting early lesions of lipomatosis. There were no macroscopical areas of fat necrosis found in any of the lesions.

Pathologist's Report.—The specimens comprised :—

(i) A length of large intestine, with irregular fat deposits up to 8 cm. thick lying on the subserosa. In places, these deposits were on opposite sides of the intestine, the mesenteric attachment and the anti-mesenteric border appearing practically free. In section, there was slight fat necrosis in parts.

(ii) A large oval sheet of fatty tissue, in which lay small sections of intestine, cut transversely (see Fig. 1).

(iii) The uterus and vagina, with a piece of rectum. Diffuse masses of fat were present in the broad ligament, particularly on the left side near the uterine body, and near the origin of the uterine artery.

CASE 6. July, 1951.

Subject.—Pedigree attested Guernsey cow, eight years old. Bodily condition good. Last parturition August, 1948, with her third calf.

History.—On July 15th, 1951, this animal was examined as she was suffering from symptoms of acute enteritis. A faeces sample was taken, and proved negative for *Mycobacterium johnei* and coccidia. She was not feeding, and had a staring coat.

The condition resolved slightly with treatment, until July 19th, when she was found down in her box, unable to rise, but bright and sensible. An examination revealed oedema of the sub-maxillary space, watery motions and inappetence ; temperature 101·4° F. Heart sounds were weak, and 85 per minute. Firm areas could be faintly discerned on palpation of the left flank, suggestive of lipomatosis. Slaughter was advised, and carried out on July 22nd, 1951.

Previous History.—In view of the condition of lipomatosis being intimately concerned both mechanically, and also possibly from the endocrine aspect, with reproduction, the animal's earlier history is of interest.

She was a well-known show cow, with heavy lactations (three in all, each over 1,000 gallons). Following her third calving, she did not show signs of oestrus, and after three months of this anoestral state she was examined. Rectal palpation revealed no gross abnormalities, the ovaries being slightly enlarged, but apparently inactive. Despite treatment with stilboestrol and follicle-stimulating hormone, later combined with luteinising hormone, no signs of true oestrus were seen. During this period (up to March, 1949) the animal increased in body fat. Hoping that the spring grass would effect a favourable ovarian response, the animal was turned out to grass, and all other treatment stopped. By July, 1949, with still no signs of a normal oestral cycle developing, and with a definite deterioration in the state of the ovaries, it was decided to place the animal on thyroxine. This was in an endeavour to increase the metabolic rate, reduce body fat, and possibly stimulate pituitary or ovarian function, or both. The former object was achieved, and a reasonably lean condition produced. The ovaries, certainly, decreased in size, possibly as a result of fat removal, and signs of ovarian activity were seen. On one occasion, when a follicle was felt in the right ovary, the animal was served. Thyroxine administration was stopped. A pregnancy examination 10 weeks later revealed an empty uterus and obviously the anoestral state had once more reasserted itself. The cow was therefore condemned from the breeding aspect, and retained in the herd purely as a " pensioner," until the time of her death in July, 1951.

POST-MORTEM EXAMINATION.—General condition of the carcase was good, although slightly oedematous.

Abdominal cavity.—Lesions of lipomatosis were found throughout the mesentery, particularly that of the lower bowel. The lesions varied considerably, some being obviously well advanced and of long standing, whilst others appeared to be of recent origin. The genital tract showed large depositions of fat in the ovarian tissue, and the ovarian bursae were fatty and pendulous.

The kidneys were surrounded by massive fatty lesions, and these organs were macroscopically pale and oedematous in appearance. Small areas of adhesion were found between the more superficial of the abdominal lesions and the abdominal wall. This was particularly marked where lesions were adjacent to the liver, the cardiac lobe especially being involved.

Thoracic cavity.—This is the only case where thoracic lesions of lipomatosis were found. The anterior part of the thorax was markedly involved, especially in the region of the thymus. The heart was fatty, enlarged, and the musculature flabby. Two large masses, one anterior to the heart and one posterior, were intimately attached to the parietal pericardium, and obviously had produced the symptoms of cardiac embarrassment seen immediately prior to death. This was no doubt aggravated by the lesions around the kidneys, producing acute vascular embarrassment.

Pathologist's Report.—The specimens comprised :—

(i) Kidneys, showing lobulated masses of fat, up to 4 cm.

across, around the capsule. In section, the cortex showed marked deposition of hyaline material in the glomeruli and in the walls of blood vessels ; this material had the distribution of amyloid material, but did not react to the usual staining tests for amyloid.

(ii) A wedge-shaped mass of fatty tissue, about 10 cm. across, from near the heart, showing histologically, slight fat necrosis in parts.

CASE 7.

Subject.—Pedigree Guernsey bull. Born April, 1946. Examined, on behalf of an insurance company, December 1st, 1949.

This bull had had a successful show and breeding career, but had begun to show clinical symptoms of illness at the beginning of November, 1949, *i.e.*, a month previous to the date of my examination.

I found this bull in good condition, with an estimated live weight of approximately 13 cwt. Temperature and pulse were normal. He was, however, taking little food and one was able to accept the owner's statement that he was losing weight. The bull walked freely when exercised over a hard surface, and one was unable to detect any evidence that the bull was in pain.

Rectal examination showed that the large bowel was surrounded by a considerable amount of new and abnormal tissue. This pressure on the bowel by the new tissue resulted in a considerable narrowing of the lumen of the bowel, and faeces were not being voided in normal amounts, or with the usual expulsive effort. The bull showed no evidence of pain during the rectal examination.

Owing to the fact that the bowel was fixed by the surrounding tissue, the bowel did not contract normally on one's hand during the rectal examination, neither did the animal strain against one's hand. While I was present the bull passed faeces voluntarily, but the amount of faeces passed was small in amount, being, approximately, the volume of a tea-cup full.

Palpation of the right side of the abdomen detected the presence of a large new growth, which appeared to be the size of a rugby football.

A diagnosis of lipomatosis involving the large bowel, made by the owner's veterinary surgeon, was confirmed, and it was decided to examine the bull at a later date in order to determine whether the new growth had increased in size or regressed.

The bull was again examined on December 14th, 1949, when it was found that he had lost condition, and that the new growth had increased in size. The passage of faeces was now obstructed to a much greater extent than it had been at the time of the first examination, and the bull appeared to be suffering considerable discomfort bordering on actual pain.

The early death of the bull was anticipated, and he did, in fact, die during the night of December 14th, 1949, only a few hours after the second examination.

Post-mortem examination showed that the whole of the large intestine and the rectum were enveloped in masses of lipomatous tissue, and that the passage of faeces had become so obstructed that there had been invasion of bowel organisms through the bowel wall infecting the fatty tissue of the lipomatous growth, and leading to an acute peritonitis with death from toxaemia.

Photographs taken of the lipomatous tissue show :—

Fig. 2 : Sagittal section of part of the colon, showing its complete envelopment in lipomatous tissue ; and

Fig. 3 : Cross-section of the colon, showing the partial strangulation caused by its envelopment by the lipoma.

FIG. 2.

FIG. 3.

I was informed that a similar case in a bull on this farm had quite recently been encountered.

[*This report was kindly written and contributed by Professor H. Burrow.*]

Gross Pathology of Bovine Lipomatosis

The terms lipomatosis and fibro-lipomatosis have been used in an endeavour to convey the clinical aspects of the lesions described. It is obvious that every lesion contains *some* fibrous tissue. However, the degree of fat in the deposit (roughly assessed by palpation, and appearance at *post-mortem* examination) is alluded to by the two terms lipomatosis, or fibro-lipomatosis. Clinically, therefore, a typical lipomatous lesion can, following fat withdrawal (*e.g.*, Case 2), be more accurately described as one of fibro-lipomatosis.

The lesions common to the cases recorded may be summarised thus :—

A wide variation of size of the lesions was a noticeable point. In addition, a great variation in shapes was found. In Case 3, the one palpable lesion was roughly circular, being less than 6 cm. in diameter and about 2 cm. thick, whilst in Case 2 the lesion was large, being about 20 cm. long, 10 cm. wide and 5 cm. thick. The areas of involvement in three cases were distributed throughout the posterior abdominal region, and on palpation *per rectum* had a consistency similar to that of normal ovarian tissue. A few, however, were of a truly fibrous nature, and almost of bone firmness. The microscopical picture was typical (as in Case 2) of lipomata as found in other species.

In only one case were lesions found in the thoracic cavity, and in this case the degree of abdominal lipomatosis was very well advanced. This would suggest that primarily lesions are found in abdominal fat, and thoracic lesions are a later area of involvement.

Differential Diagnosis

Owing to the wide variety of shapes, sizes and consistencies found, the lesions might be mistaken for any one of the following conditions :—

1. Mummified foetus.
2. Extra-uterine pregnancy.
3. Pregnancy.
4. Tuberculous peritonitis (" grapes ").
5. Organised uterine adhesions following local trauma or peritonitis.

Main Points on Differential Diagnosis

1. *Mummified Foetus.*—Whilst the state of lipomatosis, or more especially fibro-lipomatosis, might well resemble a mummified foetus in shape and consistency, especially if there is a large amount of fibrous tissue present, the main differences are :—

(1.) Lipomatous lesions are extra-uterine, and this point is discernible only by careful examination by rectal palpation.

(2.) Lipomatous lesions are usually numerous, and it is more usual to find several masses situated on or near the rectum and large intestine, as opposed to the single mass of the mummified foetus.

2. *Extra-uterine Pregnancy.*—Whilst this condition is rare, in one case which was diagnosed no difficulty was found in identifying individual portions of the calf. The blood supply in this case was apparently derived from mesenteric vessels. The situation of the ectopic mummified calf, therefore, was in an area where lipomata might be found. However, the diffuse distribution, size, and lack of identifiable skeletal structures, in lipomatosis, make this condition distinct from that of extra-uterine pregnancy. In addition, whereas the lesions of lipomatosis usually become progressively larger with time, the extra-uterine foetus becomes smaller.

3. *Pregnancy.*—As with a mummified foetus, the main difference is that the body of the foetus is intra-uterine. In addition, in normal pregnancy, the foetus being suspended in fluid, is mobile, and not fixed, frequently responding by movement to a touch. In Case 1, where pregnancy and abdominal lipomatosis were concurrent states, it was possible to differentiate between cotyledons and the fatty masses by palpation, the cotyledons being the softer of the two structures.

4. *Tuberculous Peritonitis.* — This condition, especially where a chronic tuberculous salpingitis, bursitis, or similar condition is found, may well be confused with an early case of lipomatosis, on rectal palpation. In practice, a useful point of differentiation is a negative result to the tuberculin test. In addition to the poor condition of the tuberculous subject, the lesions feel more friable as compared with the harder circumscribed lesions of lipomatosis.

5. *Organised Uterine Adhesions.*—These are usually localised, but occasionally may be diffuse in their distribution. If a detailed history is absent, the main diagnostic difference is to be found on palpation, rectally. Adhesions following severe trauma at parturition are usually found affecting the posterior genital tract, *i.e.*, posterior body of uterus, cervix and vagina.

The rectum may or may not be involved by uterine adhesions, although in my experience, especially in cases where there has been any marked degree of metritis, it is not uncommon for the rectum to be firmly anchored to the uterus. Conversely, lesions of lipomatosis are generally separable from viscera, are widely distributed, and in addition, these lesions tend to be more anterior, or abdominal, in location.

With lipomatosis lesions, there is a fixation by encirclement, whereas adhesions from trauma show a firm joining of surfaces over an area closely related to the points of trauma, resulting in the anchorage of adjacent organs by scar tissue.

Discussion

The condition of lipomatosis and the closely allied state of fibro-lipomatosis (where an abundance of fibrous tissue is found), is of interest to the veterinarian, and especially to those engaged in bovine infertility work, from five main aspects. These are :—

1. As a factor in the impairment of fertility.
2. As a factor capable of producing complete sterility.
3. The importance of differential diagnosis (*e.g.*, foetal mummification).
4. A condition which may adversely affect general health (*e.g.*, mechanical pressure on adjacent organs).
5. A potentially lethal condition.

Whilst, at this stage, the aetiology of the condition cannot be fully assessed, it seems highly probable that a disturbance of fat metabolism occurs, possibly associated with a genetic or breed factor. No marked alteration in the blood cholesterol level was seen, however, in three cases sampled. The end result is abnormal deposition of fat, and consequent impairment of associated organs, due to mechanical interference by these deposits. It is apparent that it is not necessary for the animal to be in fat bodily condition before lipomatosis develops, and cases are seen where animals in a poorish bodily state have lesions of lipomatosis. Conversely, a regression of lesions of lipomatosis is not necessarily associated with a reduction in body fat, as is apparent from Case 2, where a

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large fibro-lipomatous lesion became smaller, whilst body fat increased.

Diagnosis can be carried out only by a detailed rectal examination. Prognosis is usually guarded, as factors influencing the rate of growth of the lesions have yet to be fully explored. Diet would appear to be of only secondary importance so far as the development of this condition is concerned. It should be borne in mind that the condition is progressive and therefore the prognosis should be guarded.

The seven cases of lipomatosis here described were found on clinical examination of the animals concerned. As described, the lesions, in all cases except one, were confined to the abdominal cavity. All the cases occurred in animals in attested herds, and were therefore animals which had successfully passed a tuberculin test on several occasions, and could be presumed to be free of any tuberculous infection. No common dietetic or management factors could be identified in the seven cases, but all subjects were Guernsey or Guernsey cross-bred animals.

Summary

1. Seven cases of bovine lipomatosis in attested Guernsey or Guernsey cross-bred cows are described.

2. The breed incidence and possible aetiology are discussed briefly.

3. The relationships of the condition to health and fertility are detailed and main points of differential diagnosis listed.

Acknowledgments.—I would like to acknowledge with grateful thanks the observations on clinical material and helpful comments given by Professor H. Burrow, and his contribution of Case 7. In addition, the help given by Dr. N. Barron, Mr. D. L. Stewart and Mr. W. R. Wilson has been greatly appreciated. Mr. E. Cotchin performed the pathological examination of specimens, and Mr. E. F. Lewis made the cholesterol estimation and prepared the photographs relating to Case 7. Mr. F. A. Shepherd (Royal Veterinary College, Pathology Department), kindly supplied the photograph of Case 5.

References

Burrow, H. (1951.) Personal communication.
Gaiger & Davies. "Veterinary Pathology and Bacteriology." Third edition. 1946.
McEwen. "Meat Inspection." 1934.

GRANTS FOR RESEARCH AND LECTURING IN THE UNIVERSITIES OF THE UNITED STATES

The American Embassy and the United States Educational Commission in the United Kingdom announce a programme of grants to assist senior British scholars to lecture or carry out research in the universities of the United States. The grants will be paid in dollars and they will be tenable for the academic year 1953-54. Candidates who receive these grants—which are intended to serve either as full living allowances or as supplements to salaries for part-time teaching or fellowships—will be expected to attend American universities as visiting scholars and, therefore, no provision will be made for the payment of tuition fees. In order to attend an American university as a visiting scholar applicants should be able to show considerable professional or academic attainment.

Full particulars of these grants (also of travel grant supplements) and conditions of eligibility, together with forms of application, may be obtained from the Assistant Cultural Relations Officer, Room 302, 41, Grosvenor Square, London, W.1.

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"THAT SLANG TERM 'VET.'": A JUDICIAL PRONOUNCEMENT

Reference to a veterinary surgeon as a "vet." by a barrister at Lancaster County Court on Monday caused Judge C. B. Fenwick to remonstrate:—

"Not vet., if you please. They are entitled to their full appellation. You wouldn't describe a medical witness as a 'doc.'"—*Lancaster Guardian.*

CLINICAL COMMUNICATION

A REPORT ON CANINE FILARIASIS

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Introduction.—Dr. L. R. Hutson has reported canine filariasis as being prevalent in Antigua, B.W.I., and recently several cases have been observed by the writer in St. Kitts.

The purpose of this paper is to present the records of four cases of filariasis, and to draw attention to the fact that in all cases the outstanding symptoms were skin lesions of an eczematous or papular nature and intense skin irritation. In no case was the text-book picture of cough, disturbed cardiac function, emaciation, dyspnoea, etc., present.

Test Procedure.—The most satisfactory method for diagnosis of the larvae of *Dirofilaria immitis* was found to be that described by Morris, Duhel and Green (1935), which is as follows: Withdraw 1 c.c. of blood from a vein and add immediately 5 c.c. of a 2 per cent. acetic acid solution; mix thoroughly and centrifuge three to five minutes, decant the supernatant fluid and place a drop of the sediment on a slide, cover with a cover slip and examine. It was found that staining with Wright's or Giemsa's stain after drying the film, when the microfilariae are stained blue, assisted identification under low power. Whole blood smear tests were not found effective. All tests and retests were performed during the hours of 9 to 10 a.m. No nocturnal testing was undertaken, and although Schnelle (1951) and others report a marked nocturnal periodicity, there was never any difficulty in demonstrating microfilariae by the method used. The filariae measured from 270 to 278 microns (Lapage).

With regard to the recognised hosts for the development of *D. immitis* larvae, mosquitoes belonging to the genera *Aedes*, *Culex* and *Anopheles* can be found in St. Kitts. The common dog flea *Ctenocephalides canis* is also a very frequent host.

Case Histories

Following are the condensed case histories of four dogs with a positive microfilariae blood test.

Case 1.—Eight-year-old male bull terrier, weight 48 lb. Had been treated for eczema by the owner on and off for five months. When presented, a large raw eczematous area was

Fig. 1.—Showing subject of Case 1, with ulceration of the scrotum. This picture was taken before treatment and the dog was destroyed later.

observed along the back and rump. Similar lesions with ulceration were observed on the scrotum. Caladryl (calamine and benadryl emulsion) was prescribed, and the dog was returned after three weeks for re-examination. The eczematous area on the back had cleared up very well, but the scrotal lesions were more marked. There was a fairly deep area of ulceration with pockets and pus formation. The superficial inguinal lymph glands were enlarged, hard and tender. A blood sample was taken, treated as described, and films made. These were positive for microfilariae with a classification of 3+ according to the scale adopted by Foley (1950).

Case 2.—Five-year-old male mongrel, weight 62 lb. The dog was brought for examination due to an extensive papular eruption involving the muzzle, abdomen, back and scrotal area. There was intense skin irritation, but otherwise the dog was in good condition and had no other symptoms. Blood slides revealed microfilariae with a classification of 3+.

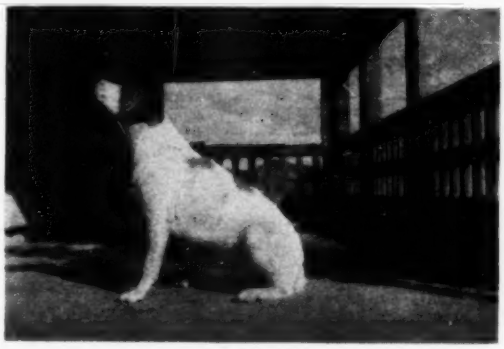

Fig. 2.—Subject of Case 2. Although fairly large numbers of filariae were found—approximately five per field under 1/6 mm. objective—the dog can be seen to be in excellent condition.

Case 3.—Two-year-old male bull terrier, weight 45 lb. This dog was living in the same house as Case 2, and at the suggestion of the writer was brought for a check-up and examination for filariasis. The dog appeared in excellent condition, and was apparently normal apart from a papular eruption limited to the inguinal area, and a history of scratching. Blood slides were positive for microfilariae, classification 2+.

Case 4.—Seven-year-old female mongrel, weight 32 lb. This dog was in poor condition; it displayed symptoms of lassitude, and was continually biting and scratching at itself. There was an extensive papular dermatitis covering most of the body, loss of hair and scab formation. The owner was not willing to have the dog treated. Microfilariae classification 4+.

Treatment.—It is not clear from existing literature for how long treatment with antifilarial drugs should be continued, although it is generally accepted that treatment should continue until no microfilariae can be found in the blood stream. In the cases now recorded, which possibly were mild or early cases of the disease, treatment was discontinued when a clinical cure was effected.

The dosage of Banocide used was rather less than the dosage scale recommended by the manufacturers of the drug. It was very well tolerated and no supportive treatment was given.

Case 1 was treated with Fouadin (trivalent antimony compound) which was administered by intramuscular injection at the dosage scale recommended by Wright and Underwood (1934) for 16 successive days. Blood smears taken one week after treatment revealed that microfilariae were still present. The dog was destroyed later, but unfortunately there was no opportunity to perform a *post-mortem* examination.

Case 2 was treated with Banocide (Diethylcarbamazine) based on 5 mg. per lb. bodyweight, three times daily for 14 consecutive days. Blood slides taken after treatment still revealed microfilariae but in reduced numbers; there was a slight clinical improvement. After an interval of two weeks treatment was recommenced, the dosage being increased to 8 mg. per lb. bodyweight three times daily, and was continued for a further 14 days. On re-examination at the end of this period there was a complete clinical cure and no microfilariae were found on blood examination on three successive days.

Case 3 was treated with Banocide at the rate of 8 mg. per lb. bodyweight three times daily for 14 consecutive days. A blood slide taken at the end of treatment revealed that microfilariae were greatly reduced in number, only two being found in several slides prepared by the method described (classification 1+). The skin lesions in the inguinal area were completely healed, and in view of this fact it was decided not to continue the administration of the drug in order to obtain complete elimination of microfilariae.

Summary

(*a*) Dermatitis or eczematous skin lesions with intense irritation constituted the prominent feature in four cases of *D. immitis* infestation.

(*b*) A reliable technique for blood examination for the detection of *D. immitis* larvae is described.

(*c*) A note is given on treatment with Fouadin and Banocide.

Acknowledgment.—The thanks of the writer are expressed to Dr. G. Lapage, of the Institute of Animal Pathology, Cambridge University, for his kind interest and assistance in the identification of the parasites.

Lederle Laboratories, also, are thanked for their interest and a supply of Diethylcarbamazine.

References

Foley, R. J. (1950.) *Vet. Med.* **45.** No. 12.
Hutson, R. L. Studies on Canine Filariasis.
Lapage, G. Personal communication.
Morris, Duhel & Green. (1935.) *N. Amer. Vet.* **16.** Nos. 9 & 11.
Schnelle, G. B. (1951.) *Vet. Med.* **46.** No. 6.
Wright, H. W., & Underwood, P. C. (1934.) *Ibid.* **29.** No. 6.

MORE SHOW SUCCESSES FOR MAJOR TOWNSEND'S "STANTON DALE"

Since her success at the Hunter Show at Shrewsbury (recorded in our issue of July 12th) Major C. W. Townsend's grand mare "Stanton Dale" has scored twice more, these three being the only occasions on which she has been shown. She was first in the Hunter Brood Mare class at Bedford County Show on July 12th, also winning the Hunter Improvement Society's Silver Medal. Her foal was placed second. At Peterborough on July 16th she won the Light Weight Hunter Brood Mare class from 20 entries and was placed reserve champion in the Hunter Brood Mare class. Her foal was again placed second.

* * * * *

A 10-year-old troop horse of the Household Cavalry detachment staging an exhibition of trick riding at the Sussex County Agricultural Show in Cowdray Park, Midhurst, on July 17th, was destroyed after he pulled out a fence stake to which he was tied after the show and galloped away. The stake tangled and broke his foreleg.

ABSTRACTS

Parasitic Gastro-enteritis of Cattle*

It is impossible to do justice to this interesting paper in a short abstract; it must be read in the original.

The author reports that the important species of helminths that infect dairy cows in Queensland are *Haemonchus contortus, Cooperia pectinata* and *C. punctata, Bunostomum phlebotomum* and *Oesophagostomum (Bosicola) radiatum*, but there may also be a serious disease caused by immature amphistome flukes *(Paramphistomum)*. Infections with *Trichostrongylus axei* and *Ostertagia ostertagi* are less frequent and *Strongyloides papillosus* and the tapeworm *Moniezia benedeni* only rarely cause clinical symptoms. In beef cattle the species causing disease appear to be *H. contortus* and *O. radiatum* and (rarely) *B. phlebotomum*.

Parasitic gastro-enteritis is most common from April to September and occurs mainly in young cattle. It is rare in animals over two years old. Cattle develop a resistance during the first 18 months, which appears to be maintained during the rest of their lives. It is strongest against *B. phlebotomum*, which may be completely eliminated; but it affects *Cooperia* species first and *H. contortus* and *O. radiatum* are the last to be affected. During the succeeding discussion of the paper D. F. Stewart gave a valuable brief account of his work on immunity to helminth infestations of cattle and sheep. Dr. Roberts discusses the seasonal fluctuations of the populations of the helminths considered and their relationships to rainfall and temperature. The control of parasitic gastro-enteritis is discussed. Permanent calf-pastures are dangerous; older resistant cattle may possibly be used to clean up infected pastures; overcrowding should be avoided; hygiene of cattle-yards and calf-pens is important, especially against hookworm infections *(Bunostomum)*; good nutrition is stressed and strategic treatment with phenothiazine to prevent heavy infestations is discussed. During the discussion Dr. H. McL. Gordon stressed the importance of harm done by immature worms and further emphasised the importance of correct timing of treatment with phenothiazine.

G. L.

* **Parasitic Gastro-enteritis of Cattle, with particular reference to the Occurrence of the Disease in Queensland.** Roberts, F. H. S. (1951.) *Austral. Vet. J.* October. pp. 274 *et seq.*

* * * * *

Modified Caslick's Operation in Chronic Vaginal Prolapse in Cattle*

Caslick's operation of partial closure of the vulval orifice in the mare has, with minor differences, been adopted by the author as a means of treating chronic vaginal prolapse in cattle.

Under light epidural anaesthesia the prolapsed vagina is washed with an antiseptic solution and replaced. The vulval mucous membrane inside the vulval lips for a width of ½ inch is elevated with a submucosal injection of local anaesthetic solution from the dorsal commissure to within 2 inches of the ventral commissure. Approximately ¼ inch of this elevated mucous membrane adjacent to the vulval skin junction is removed and the lips of the vulva are then co-apted by means of mattress sutures ⅜ inch apart, using 28 gauge stainless steel wire. To relieve tension on this row of sutures two mattress sutures of ¼-inch tape are introduced deeply through the vulval lips. All sutures are removed in 10 days. In pregnant cows the lips of the vulva must be separated by incision just prior to calving.

If the operation is necessary in non-pregnant cows it is suggested that in some cases artificial insemination may have to be substituted for natural service.

C. F.

* **The Modified Caslick Operation in the Handling of Chronic Prolapse of the Vagina.** Barker, C. A. V. (1950.) *Can. J. comp. Med.* **14**. 380–382.

REVIEW

[A World Dictionary of Breeds, Types, and Varieties of Livestock. By I. L. Mason. Pp. 272. Commonwealth Agricultural Bureau Publication. Price 30s.]

The chief aim of this dictionary is to list the names applied to all the breeds and types of horses, asses, cattle, buffaloes, sheep, pigs and goats kept throughout the world. It indicates which names are synonymous, and recommends one form for English use.

The first section classifies the breeds under each species alphabetically, and lists: (1) (in heavy type) breeds defined by a breed society, recognised by the government or official body of a country, or which represent a uniform true-breeding population; (2) (in ordinary roman type) minor, new or disappearing breeds, some extinct breeds, varieties which do not have separate breed societies, crossbreeds and other types which are not true-breeding, and wild species.

Each breed is listed under its official name in the language of its country of origin, and the following information given: synonyms, place of origin, its function or the products obtained from it, and its relationship to other breeds. Any definite characters are described, such as colour and the presence or absence of horns, but factors affected by environment, such as size, have been left out, although dwarf breeds are noted.

In this section the references are given as the entry in Animal Breeding abstracts where the information about the breed is abstracted.

In the second part the principal breeds of each species are tabulated under countries, grouped in continents. For the countries of Europe (except the U.S.S.R.) and the New World the relative numbers of the principal breeds are listed, and in most cases the numbers are taken from the F.A.O. Yearbook of Food and Agricultural Statistics, 1949. References are given to papers which give accounts of the breeds found in each country.

The whole book represents the results of many years' enquiry, and includes information collected from all parts of the world. It forms a well-set-out book of reference and achieves its object. It would be of greater value if it contained illustrations of the breeds described, and maps of their distribution, and it is possible that there may be a supplementary volume of plates at some future date.

Weekly Wisdom

I have always considered that the substitution of the internal combustion engine for the horse marked a very gloomy milestone in the progress of mankind.—The Prime Minister.

THE VICTORIA VETERINARY BENEVOLENT FUND

34th ANNUAL GENERAL MEETING

The 34th annual general meeting of the Victoria Veterinary Benevolent Fund was held at 10, Red Lion Square, London, W.C.1, on Wednesday, June 4th, 1952.

There were present: Professor J. B. Buxton (President-Elect) in the chair, Professor T. J. Bosworth, Mrs. D. I. Glover, Professor R. E. Glover, Mr. G. N. Gould, Professor W. M. Mitchell, Mr. John D. Peele, Captain J. W. Procter, Professor L. P. Pugh, Mr. R. H. Smythe, Professors W. L. Weipers, G. H. Wooldridge, Dr. W. R. Wooldridge, Mr. A. J. Wright, Mrs. M. E. Wright (President, Ladies' Guild), Professor J. G. Wright.

The Late Lieut.-Colonel P. J. Simpson

The Secretary (Mr. Cyril W. Francis): It is with deep regret that I have to inform you of the death of our President, Lieut.-Colonel P. J. Simpson, which took place on April 23rd last.

When it was known that Lieut.-Colonel Simpson was so ill that he was unlikely to recover, the Council at its meeting on April 4th unanimously resolved that Professor Buxton should be nominated as President-Elect. With the passing of Lieut.-Colonel Simpson on April 23rd, Professor Buxton then took over the duties of President.

Professor Buxton: Before we proceed to the business on the agenda I must refer to the very sad loss which this Fund has sustained in the death of our President, Lieut.-Colonel P. J. Simpson.

There is no need for me to tell you that he devoted almost a professional lifetime to the interests of the Fund, and gave it his ardent support throughout that period. But more than that, he served in the capacity of an officer of one kind or another for a period of 25 years, a remarkable record. On June 2nd, 1927, he became Hon. Secretary and held the post until June 3rd, 1950—that is 23 years—when appointed President in place of Mr. Arnold Spicer. As he was the President at the time of his death he has continuously served as an officer for a quarter of a century. In his capacity as Hon. Secretary he also undertook the duty of unpaid Secretary from April 26th, 1946, until June, 1950.

Perhaps his greatest achievement was his conception of the idea of a Ladies' Guild which he announced in 1931, and in the following year the first meeting was held under the appropriate Presidency of Mrs. Simpson.

In my long association with the Fund and other matters appertaining to the profession I have never come across a man who has given himself so wholeheartedly to any job he undertook, and especially to benevolence his loss is a grievous one; but it is safe to say that he lives, as he should live, in our undying gratitude " his laurels gathered, his duty done."

You will, I expect, wish a motion of grief to be passed, and I should like to move it from the chair. (Agreed.)

Professor W. M. Mitchell: May I suggest that the Secretary sends a copy of what you have said to Mrs. Simpson?

The President-Elect: That will be attended to.

Minutes.—The minutes of the previous annual general meeting held on June 6th, 1951, were taken as read and signed.

Apologies for Absence.—The Secretary announced apologies for absence from the following: Mr. H. W. Dawes, Major J. J. Dunlop, Mr. Arnold Spicer and Captain A. Whicher.

Election of Officers

President.—Professor G. H. Wooldridge: It is with great pleasure that I propose that Professor Buxton be elected President of the Fund for the ensuing year. I know of no one more fitted for and more able to carry out the duties of the office. He has been associated with the sound working of the Fund for so long that I can think of nobody who will be more able to direct and advise us during the coming year.

The proposition was seconded by Professor W. M. Mitchell, and was carried unanimously.

The President: I am very grateful to you. It is not an easy position to fill after the men who have held it before me, but I will do all I can to further the interests of the Fund.

Vice-Presidents.—Mr. H. W. Dawes, Mr. G. P. Male and Professor G. H. Wooldridge were re-elected Vice-Presidents, Professor L. P. Pugh being elected a Vice-President to fill the vacancy created by the election of Professor Buxton as President.

Hon. Secretary.—The Secretary: Having received an intimation from Mr. Spicer that he did not desire to stand again for the office of Hon. Secretary, the Council at its meeting in April last, as required by the Articles of Association, nominated Major J. J. Dunlop to fill the office of Hon. Secretary.

The President: Is it the wish of the meeting that he be appointed? (Agreed.)

Hon. Treasurer.—The Secretary: At the same meeting the Council unanimously resolved that Mr. H. W. Dawes should be nominated to succeed Professor Buxton as Hon. Treasurer when the office became vacant. (Agreed.)

Auditors.—The Auditors, Messrs. Wilkinson, Chater and Co., were reappointed for a further year.

Annual Report and Statement of Accounts

The President: The Annual Report and Statement of Accounts have been circulated. There are one or two points to which I should like to refer. I would draw your attention to the Christmas Gifts Account and remind you that the total amount received in 1951 was £671 19s. 6d., made up of £601 8s. from the Ladies' Guild and various other contributions. It is a matter of considerable gratification that there is a balance, and, according to the wishes of the Ladies' Guild, there will be another distribution in June. We are busy preparing our lists now and that will be done in due time.

You will have noted that there are several legacies, which, again, are very comforting. On page 6 of the Annual Report you will see that the subscriptions are much about the same. You will note that the actual amount received in subscriptions was £377 and the Ladies' Guild again contributed the splendid sum of £300. In short, I do not know what we should do without the Ladies' Guild. We have also been fortunate enough to get subscriptions under a legal covenant to the amount of £48 0s. 6d., which is a valuable addition to the income.

Are there any points in the Annual Report and Statement of Accounts to which any member would like to refer?

Professor G. H. Wooldridge: There are one or two points to which I should like to refer, particularly in regard to the donations that we have received during the past year. You have already made reference to it, Mr. President, but I think that more particular reference might be made to the sum, and yet one hesitates to do that because, although there have been some remarkably generous donations, we equally welcome those that are not so large.

It might almost seem invidious to single out any of the larger ones, but I take the risk in that connection, and in the first place I particularly want to record on our minutes our greatest possible appreciation of the work of the Ladies' Guild. As you have said, Mr. President, I do not know what we should have done without them. It was great prevision on the part of the late Colonel Simpson when he visualised the setting up of the Guild. I am certain that he never imagined the heights they would reach in their work. The work of the Executive Committee and the Council has been enormously relieved and made comparatively easy as a result of the efforts of the Ladies' Guild, and we cannot too highly express our appreciation of it.

I should also like to refer to Mr. Stainton's donation. He transferred to the Fund fees which would have been available to himself at various shows. The Southern Counties Canine Association has been interested in our work and has made contributions, as has also the Bexhill Horse Show, as it has done several previous years. We are grateful to Mr. Whicher for his work in that direction; this has become almost an annual contribution to the Fund.

I feel I must make a special reference to the work of the two Colleges and the students, the Dublin Veterinary College and the Royal (Dick) Veterinary College. The work of the students on behalf of the Fund augurs well for it. I feel that it means that when the students of the present day become veterinary surgeons they will all join the Benevolent Fund and still continue their good offices on behalf of it.

Professor W. M. Mitchell: We have heard what the ladies do. What do the men do? I do not think that we have played our part to the extent that we should as a profession. After all, we are 5,000 strong. There was a drive just after the first world war and I feel that those who are subscribing are largely those people who were drawn in at that time. We ought to get this over to the men. After all, it is their benevolent fund primarily. Of course, the Ladies' Guild is getting deflected money which the gentlemen may consider is largely theirs, but I should like to see our capital being added to by means of a banker's order to the Fund. The Council might consider ways and means of bringing more attention to this.

The President: Thank you very much. We will take steps to popularise it. On one or two occasions I have been told by male members that they already contributed something through their wives. I think it is up to the wives to see that the men do something on their own account. I am sure they will.

Mr. Gould: We ought not to take the credit from the ladies for what they do. We should not be getting the money if it were not for the ladies. However, as a body we should do something to interest our members. It is disgraceful that 5,000 people contribute only about £300 a year. Something could be done and should be done. There are ways in which they can do this without cost to themselves, and more advantage should be taken of this.

Professor Mitchell: I suggest that notices be sent to the Secretaries of Divisions drawing attention to the figures which have been mentioned so that we may see if something can be done in that way.

Mrs. D. I. Glover: Except for paying for our tickets for the dance at the Congress, I do not believe that the husbands give an awful lot of our money.

The Annual Report and Statement of Accounts were adopted.

Elected Members of Council.—Professor W. L. Weipers and Mr. A. J. Beeson were elected to the Council to fill vacancies caused by the death of Mr. H. W. Steele-Bodger and the resignation of Mrs. W. R. Wooldridge.

Any Other Business.—Professor Wooldridge: I think it appropriate to express our welcome to the new President of the Ladies' Guild, Mrs. M. E. Wright, who is here with us to-day. I am quite sure we shall have her assistance in every possible way. Perhaps it is almost too much to expect the Ladies' Guild to carry on the work to the same extent as they have done in the past, but I am sure that it will not be the fault of the new President if they do not even exceed what they have done before.

The proceedings then terminated.

QUESTIONS IN PARLIAMENT

Foot-and-Mouth Disease

Mr. Peart (July 24th) asked the Minister of Agriculture on what international bodies concerned with foot-and-mouth disease Her Majesty's Government are represented.

Sir T. Dugdale: The International Office of Epizootics, the Organisation for European Economic Co-operation and the Food and Agriculture Organisation.

Mr. Peart: Is the Minister satisfied that these organisations are effective to combat the present outbreak in France, Britain and other European countries, and will he initiate joint discussions with the French Government to set up a European authority under F.A.O. to combat foot-and-mouth disease?

Sir T. Lugdale: I am satisfied that these bodies are all very much alive to the problem facing them. I am also satisfied that in recent months they have been coming together and working along parallel lines on the same problem. In reply to the last part of the hon. Gentleman's supplementary, I will look into that point and will continue to have it under review.

Mr. Peart: Is the right hon. Gentleman aware that action similar to this was taken by the United States Government with Mexico when they formed a joint commission?

Mr. G. Brown: Will the Minister bear in mind that there is a special agricultural sub-committee of the Strasbourg Assembly considering European agriculture, to which we are submitting a memorandum? Will the Minister see that that committee receives a memorandum from him, and suggest to them that this is the sort of practical job which they can do, instead of the rather vague things they are doing at the moment?

Sir T. Dugdale: I will certainly consider that proposal.

Mr. Peart (July 24th) asked the Minister of Agriculture what further recommendations to combat foot-and-mouth disease he has received from those international bodies on which Her Majesty's Government are represented.

Sir T. Dugdale: No further recommendations have been received since I answered the hon. Member's previous Question on July 3rd, and I would refer him to the reply I then gave.

Mr. Peyton (July 24th) asked the Minister of Agriculture how many cases of foot-and-mouth disease in the county of Somerset have been reported to his Department during the last three months; and if he will now permit the free movement of livestock in that county.

Sir T. Dugdale: None, Sir. Restrictions were imposed in Somerset and other counties in Southern England as a precaution, in view of the risk of introduction of infection from the Continent. The position in France is still serious and the peak of infection in Northern France appears to be moving westwards. Consequently, although the position is kept continuously under review, I do not think that the time has yet come to remove the restrictions.

Mr. Peyton: Is my right hon. Friend aware of the very considerable hardship and hindrance which this long protracted restriction is causing to many farmers in their production? Can he say when it will be possible for him to modify or lift the restrictions, at any rate over a limited area?

Sir T. Dugdale: I cannot give any specific date, but I think my hon. Friend will agree that it may very well be that the maintenance of the controlled areas is an important reason why Somerset has kept clear. Throughout the country the farmers have co-operated in a wonderful way, and I only hope that they will complete the last lap and thus continue the great progress which has been made.

Mr. T. Williams: Will the right hon. and gallant Gentleman see that he is not hustled into removing restrictions, in view of the potential danger of further outbreaks?

Major Beamish (July 24th) asked the Minister of Agriculture whether he is aware that, under Section 12 of the Diseases of Animals Act, 1950, owners of animals or those having charge of them in an

area infected with foot-and-mouth disease, may put up a notice forbidding people to enter premises without permission; whether he is aware that these notices have been widely ignored in spite of his appeals; how many people have been prosecuted for ignoring these notices; and if he will introduce legislation to increase the maximum penalties that can be incurred by those not observing the existing law, and take power to close rights of way in infected areas.

Sir T. Dugdale: I am not aware that the notices are being widely ignored and I have no information about the number of prosecutions, as they are undertaken by local authorities. The maximum penalty for disregarding such a notice is a fine of £50 for a first offence, which I consider to be adequate. Power already exists, under the Foot-and-Mouth Disease (Infected Areas Restrictions) Order, 1938, to close any footpath or right of way in an infected area, and this power is exercised where necessary by my veterinary inspectors.

Major Beamish: Is it the case that rights of way can be closed by law and that if they are closed there can be a prosecution if they are used by the public?

Sir T. Dugdale: Yes. Local authorities and the police are responsible for enforcing these regulations.

Mr. Hurd (July 24th) asked the Minister of Agriculture if he can now announce the terms of reference and membership of the Departmental Committee to be appointed to review the measures taken to combat foot-and-mouth disease in this country.

Sir T. Dugdale: No, Sir, but I hope to do so in the fairly near future so that, if the present epidemic abates sufficiently, the Committee will be ready to start work in the autumn.

Mr. Hurd: Would my right hon. Friend bear in mind that we may unhappily be faced with another invasion of infection from the Continent in the early autumn and that it is important that this Departmental Committee should begin to gather information about the measures which ought to be taken?

Sir T. Dugdale: If we are unfortunate enough to have another epidemic it is certainly not my intention to put off unduly the enquiry.

Major Anstruther-Gray asked the Minister of Agriculture whether the Departmental Committee which he proposes to set up to enquire into the prevention of foot-and-mouth disease will include representatives from Scotland.

Sir T. Dugdale: It is my intention to consult with my right hon. Friend the Secretary of State for Scotland on the selection of at least one member of this Committee.

Major Anstruther-Gray: Is my right hon. Friend quite sure that one member is enough?

Sir T. Dugdale: I propose to keep down the number of this Committee.

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Slaughterhouses (Building Programme)

Mr. F. Willey (July 21st) asked the Minister of Food what progress has been made with the emergency building programme of slaughterhouses; and if he will make a statement on Government policy regarding slaughterhouses.

The Minister of Food (Major Lloyd George): Nine slaughterhouses, including two experimental premises, are provided for in this programme. One at Guildford is in operation and four others are expected to be completed by next October. Work should shortly start on another and discussions are proceeding about the sites for the remaining three. I cannot yet make a statement on long-term slaughtering policy.

Mr. Willey: I am sure the right hon. and gallant Gentleman will agree that this is a difficult and urgent problem. Will he do his best to expedite this building programme?

Mr. Deedes: Is my right hon. and gallant Friend aware that some of these emergency slaughterhouses, built particularly to meet the need of foot-and-mouth disease restrictions, have suffered from cheese-paring on hygienic facilities such as fans and running water? Will he see that there is no loss of meat, as there has been on one or two occasions, through lack of these facilities?

Major Lloyd George: The word "experimental" was used when the original programme was started. My hon. Friend must not confuse these slaughterhouses with the temporary slaughterhouses put up because of foot-and-mouth disease.

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Cow Hides (Warble Fly Damage)

Mr. Lambert (July 21st) asked the Minister of Food whether he will give an estimate of the percentage of cow hides damaged by warble fly in the last year.

Major Lloyd George: During the year ended April, 1952, about 15 per cent. of the cow hides from Ministry slaughterhouses were so damaged.

Mr. Lambert: Will my right hon. and gallant Friend consider, after due notice, paying lower prices for cattle which are affected by the warble fly in order to encourage the campaign initiated by the Minister of Agriculture?

Major Lloyd George: I should be happy to consider any suggestion which would help to reduce this damage. I should like to consult my right hon. Friend the Minister of Agriculture before doing anything.

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Stray Dogs (Care)

Mr. Peter Freeman (July 24th) asked the Secretary of State for the Home Department how many stray dogs were brought to police stations in the Metropolitan area as lost or in need of protection in 1951; how long they are maintained at stations; how many were restored to their owners; whether separate accommodation is provided for dogs and bitches when the latter are in season; how many were destroyed; what is the method of slaughtering; how much per week a police station is allowed for maintenance of a dog; and what action he is taking in this matter.

Sir D. Maxwell Fyfe: In the Metropolitan Police District stray dogs are not usually kept at police stations for more than 24 hours as the two dogs' homes (Battersea and North London), appointed under the Dogs Act, 1906, collect dogs from stations daily except on Sundays. Many dogs are claimed by their owners whilst at the police station, but no precise figures are readily available. In 1951, 18,517 dogs were sent to the two dogs' homes where they are kept for at least seven days; 3,967 were restored to their owners, 10,441 were destroyed by an electrical process and the remainder were sold by the homes. Bitches in season are given separate accommodation at both stations and the homes and biscuits and water for dogs are provided at all police stations.

NOTES AND NEWS

Diary of Events

Aug. 13th.—Meeting of the Editorial Executive Sub-committee, B.V.A., at 36, Gordon Square, W.C.1, 2.30 p.m.

Sept. 7th—13th.—Seventieth Annual General Meeting and Congress of the British Veterinary Association, at Harrogate.

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B.V.A. Congress at Harrogate

Application for Tickets

Application forms for tickets required in connection with the forthcoming Congress of the Association to be held at Harrogate in September were issued with last week's number of *The Veterinary Record*. As indicated thereon, applications should be received by the General Secretary not later than August 18th. It will be a great convenience, however, if application for tickets is made as soon as possible before that date.

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Congress Golf Competitions

Those wishing to enter the competition for the "Simpson" Trophy and the Ladies' Competition for the "Dunkin" Trophy are requested to notify Mr. J. O. Powley, M.R.C.V.S., 99, Station Parade, Harrogate, who is in charge of the arrangements.

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CASTRATION AND DOCKING

As intimated previously, the Technical Development Committee, which has under consideration the subjects of castration and/or docking of lambs and the castration of calves, is anxious to obtain views from members of the profession on various procedures.

Details are required, particularly, concerning the use of rubber ligatures for these purposes, and also for the docking of puppies. The Committee would be grateful if mem-

bers interested would send in to the General Secretary a note of their experiences of methods of application and materials used, of their opinions in respect of the pain factor, and of the period taken to obtain the final result. It would also be useful if observations upon the sequelae, favourable or otherwise, could be included.

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PERSONAL

Dr. D. O. Morgan's Appointment at Cambridge

D. O. Morgan, M.Sc., Ph.D., F.R.S.E., has been appointed Lecturer in Veterinary Parasitology in the Department of Animal Pathology, University of Cambridge, from October 1st, 1952. After graduating with M.Sc. from Aberystwyth Dr. Morgan did post-graduate work in helminthology under the supervision of Professor R. T. Leiper at the London School of Hygiene and Tropical Medicine and obtained the degree of Ph.D. in London in 1927. Between 1923-33 Dr. Morgan held a research appointment at the Institute of Agricultural Parasitology of the London School of Hygiene and Tropical Medicine. After this time he was appointed Senior Lecturer in Helminthology in the University of Edinburgh and the Royal (Dick) Veterinary College, which post he has held since. Dr. Morgan is well known for his researches on helminths in Scottish hill sheep and other farm stock and has been in charge of the teaching of parasitology at the Royal (Dick) Veterinary College for nearly 20 years.

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Mr. Blamire's Appointment with the Ministry of Food

Mr. R. V. Blamire, M.R.C.V.S., D.V.S.M., Assistant Veterinary Officer at the Metropolitan Cattle Market, Corporation of London, has been appointed Deputy Chief Technical Adviser on Meat Inspection to the Ministry of Food.

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Travelling Award in Medicine.—Mr. Hugh Platt, M.V.Sc. (Liv.), M.R.C.V.S., University Research Fellow in Veterinary Pathology, Department of Pathology, University of Liverpool, is one of the two recipients of Dorothy Temple Cross Research Travelling Fellowships in Tuberculosis included among the travelling awards made by the Medical Research Council for the academic year 1952-53.

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Births.—Boyd.—On July 2nd, 1952, to Rhona, wife of Robert P. Boyd, M.R.C.V.S., of Kirkby Lonsdale, Westmorland, a son—Jonathan Carlisle.

Brown.—On July 10th, 1952, at Kington St. Michael, Chippenham, to Mary, wife of Philip Brown, a sister for Sally and Simon.

Dymock.—On July 28th, 1952, at Clenoch Maternity Hospital, Stranraer, to Enid, wife of W. H. Dymock, Glennan, London Road, Stranraer, a son.

Hanbury.—On July 1st, 1952, to Denis and Eileen Hanbury, at Robsacks, Sevenoaks Weald, a son.

Moss.—On July 10th, 1952, at Five Acres, Lowton, Lancs, to Elizabeth (*née* Parker), wife of R. Moss, B.V.Sc., M.R.C.V.S., a daughter—Jane Louise.

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Death.—Balls.—On July 20th, 1952, at Teizers Farm, Burstow, near Horley, Ida Ethel, beloved wife of Leonard S. Balls, M.R.C.V.S., of Brixton Hill.

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R.C.V.S. OBITUARY

Allen, Henry, O.B.E., Major R.A.V.C. (retd.), Breffni, 48, Selborne Road, Sidcup, Kent. Graduated London, December 12th, 1899. Died July 23rd, 1952; aged 75 years.

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LEGAL NOTES

Failure of Charge of Professional Negligence

At Epsom County Court on July 18th, Judge Gordon Clark dismissed with costs to Miss Olga Uvarov, M.R.C.V.S., of Ewell, a claim for £200 in an action for negligence brought by Mr. William Hinds, a jeweller and theatrical impresario, and his wife, of Leatherhead, who alleged that Miss Uvarov had failed to diagnose cancer in one of their dogs, which disease had caused the dog to be destroyed.

In its report of the case the *Epsom Herald* states that Mr. Hinds said that in June, 1950, he brought the dog—a Borzoi named Falcon—to his home on a month's trial. While doing so in their car, his wife felt a small lump on the dog's side, and shortly afterwards asked Miss Uvarov to explain it.

Mrs. Nesta Hinds said that Miss Uvarov gave the dog a thorough examination that lasted for nearly 20 minutes. On feeling the lump on the dog's side, Miss Uvarov asked her (Mrs. Hinds) for a little of the dog's previous history. Mrs. Hinds said she did not know. "She then told me," continued Mrs. Hinds, "that as the lump was not worrying Falcon I should not let it worry me."

When Miss Uvarov called several days later and was told that the lump had grown bigger, Mrs. Hinds said, she recommended that an X-ray should be taken. It was arranged that a Miss Murray, a veterinary surgeon and friend of Mrs. Hinds, should see to this.

On August 9th, 1950, the dog was X-rayed at the Royal Veterinary College by Mr. Gordon Knight, and on virulent cancer being found, the dog was destroyed immediately.

Replying to Mr. A. E. Holdsworth, counsel for Miss Uvarov, Mr. Knight stated that it was only the third case he had known of cancer on the ribs of a two-year-old dog. It normally started in the legs and in dogs much older than Falcon.

Mr. Holdsworth: If the lump had been about the size of a shilling, as it was at the start, would it have suggested cancer to you?—No. I should probably have thought it to be a fracture.

There was no reason why Miss Uvarov should have taken an X-ray, in your opinion?—No.

Would the X-ray have revealed cancer?—Probably not if the lump was only about the size of a shilling.

Mr. Gerald Herbert Broad, M.R.C.V.S., said that he would have suspected fracture after exhausting the other possible reasons of the lump. He had never known of a similar case before. He agreed with Mr. Holdsworth that the chances of the lump being cancer would be about a "million-to-one."

Professor James McCunn, of the Royal Veterinary College, said that in his 35 years as a surgeon he had never known cancer on the ribs of a dog before, and he admitted that he would not have suspected cancer if he had been asked to diagnose the lump.

Mr. Thomas Wright, hon. veterinary surgeon to H.M. the Queen, expressed full agreement with Professor McCunn.

In dismissing the action with costs to Miss Uvarov, Judge Gordon Clark said: "The case for the plaintiffs not only broke down, but it did not even stand on its legs. I go beyond saying that there has been no negligence in this case; it should never have been brought."

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SLAUGHTER OF ANIMALS: MINISTERIAL RESPONSIBILITY

The announcement made by the Prime Minister in the House of Commons on Monday of last week, and reproduced in our issue of July 26th at page 446, to the effect that in future the conditions under which animals, including horses, are slaughtered will be under the general supervision of the Ministry of Food, whilst the Ministry of Agriculture and Fisheries will retain its functions in connection with the transport of horses, prompts us to clarify the position for our readers.

The responsibility for the licensing of slaughterhouses and knackers' yards is vested in the local authority under the Food and Drugs Act of 1938, which enactment also empowers the local authority to inspect meat and other foods intended for human consumption. The Food and Drugs Act defines a slaughterhouse as "any premises used in connection with the business of slaughtering animals, the flesh of which is intended for sale for human consumption," whilst a "knacker's yard" means "any premises used in connection with the business of slaughtering, flaying or cutting up animals, the flesh of which is not intended for human consumption." Meat intended for sale for the food of man is liable to be inspected by the local authority and if found to be unsuitable for food it must either be voluntarily surrendered to the local authority, who will then supervise its disposal, or it may be seized and taken before a justice of the peace in order that it may be "condemned as unfit for the food of man." The flesh, etc., of animals dealt with in a knacker's yard is not subject to inspection, voluntary surrender or condemnation. It is, therefore, to the advantage of the owner to have animals, the flesh of which is likely to be found unsuitable for human food, dealt with in a knackery and thus made available for sale for animal feeding purposes or otherwise disposed of to his best financial advantage. The Food and Drugs Act states that "No person shall sell, or offer or expose for sale, for human

consumption any part of an animal which has been slaughtered in a knacker's yard."

Animals which are slaughtered by the Ministry of Food are not subject to the legal provisions of the Food and Drugs Act and the powers of the local authority in connection with animals the flesh of which constitutes "rationed" meat are limited to that degree of freedom allowed by the Ministry of Food, which has stated that it desires the local authority to continue to inspect and pass meat which is the property of the "Crown," *i.e.*, the Ministry of Food, but the local authority has no power to seize such meat, and its disposal, if unfit for human food, rests with the Ministry of Food.

Horses, goats and other animals the flesh of which may be used for sale as "unrationed" meat are not purchased by the Ministry of Food and so are subjected to the provisions of the Food and Drugs Act and may be seized by the local authority and condemned by a justice of the peace in accordance with the procedure laid down in the Act.

Slaughterhouses, in general, are the property of local authorities, private individuals or public companies (such as the larger bacon factories and the co-operative societies) and since all private slaughtering of animals for "rationed" meat is prohibited, those slaughterhouses, except those relatively few licensed slaughterhouses which are still in use and which are operated privately for the production of horseflesh and other unrationed meat, now operate under the direct supervision of the Ministry of Food.

The food inspection service operates under the local authorities. Prior to 1939 the general supervision of the food inspection services was vested in the Ministry of Health, but of recent years the Ministry of Food have become increasingly interested in food inspection and have now assumed the general responsibility for the supervision of food inspection, etc., and the Minister of Food now issues regulations and revises regulations with regard to the inspection of food which was formerly the duty of the Ministry of Health. There is a strong body of opinion, in public health circles, which is sceptical of the desirability of entrusting such duties to a Ministry which is the owner and seller of the products over which it exercises the power of direction concerning the suitability of such products for sale. It is contended that a trading body is not the appropriate authority to set standards for the judgment of its own goods and that some other Ministry should be entrusted with this duty in order that the public health may the better be safeguarded.

The Public Health (Meat) Regulations are concerned with certain matters connected with the slaughter of animals for human food and the premises used for the storage, manufacture and sale of rationed meat and also goat's flesh but not horseflesh. The Ministry of Food are now considering amendments to these regulations which will bring horses, asses and mules and their flesh within the controls exercised by the Public Health (Meat) Regulations, and it is to this aspect of the matter that the Prime Minister's statement must be considered to refer.

The Public Health (Meat) Regulations provide for the notification of intention of slaughter and the retention of the carcase and offals for inspection, and the control to be exercised by the local authority, under powers conferred by the Minister of Food, with regard to the slaughter of horses would appear to be contingent upon the inclusion of horseflesh within the provisions of the Meat Regulations referred to above.

Although knackers' yards must be licensed by the local authority, within recent times the Ministry of Food have directed that, in addition, all knackeries must also hold a licence issued directly by the Ministry of Food and must keep records of all animals and carcases dealt with on their premises. This direction was issued in an attempt to limit illicit slaughtering.

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THE SIR THOMAS BAXTER MEMORIAL FUND

Animal Health Trust Fellowship

The Sir Thomas Baxter Memorial Fund to commemorate the services to agriculture of the first Chairman of the Milk Marketing Board who acted in that capacity from 1933 to 1949 has reached the total of £4,500. The National Farmers' Union, who, with the Milk Marketing Board, were responsible for the appeal being raised to this sum, have handed this amount to the Animal Health Trust for the purpose of creating "The Thomas Baxter Memorial Fellowship" which the Trust has agreed to maintain in perpetuity.

Sir Thomas Baxter was a founder Council member of the Trust and also was Chairman of the Trust's Finance and General Purposes Committee for a number of years, so that a most appropriate choice has been made and one which would surely have given pleasure to Sir Thomas Baxter himself. The new Baxter Fellowship will be open to young research workers from any part of the British Commonwealth and will enable them to investigate some problems of disease in the dairy cow. It will be tenable for three years at a time, when the elected fellow will be required to work in a university or some recognised research laboratory.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Anthrax:

Berks.—Home Farm, Beech Hill, Reading (July 21st); Church Farm, Aldermaston, Reading (July 26th).

Bucks.—Little Horwood, Bletchley (July 25th).

Essex.—Egypts Farm, Silver End, Nr. Witham (July 18th); Goddards Farm, Thaxted, Dunmow (July 21st); The Old Brewery, Great Stambridge, Rochford (July 26th).

Hants.—Ecclesbourne, Boarfield, Over Wallop, Stockbridge (July 24th).

Herts.—Hill Farm, Harpenden (July 26th).

Lanarks.—The Gardens, Wishaw Home Farm, Wishaw (July 21st).

Lancs.—Parkside Farm, off Chadderton Park Road, Chadderton, Oldham (July 22nd).

Norfolk.—Cantley, Norwich; Red Barn Farm, Carbrook, Thetford (July 18th); Mill Farm, Ormesby St. Margaret, Great Yarmouth; Northill Farm, Letton, Shipdham, Thetford (July 21st); Broadmoor Farm, Carbrook, Thetford (July 23rd); Hall Farm, Filby, Gt. Yarmouth; Church Farm, Bramerton, and the Poplars Farm, Antingham, Norwich (July 25th).

Northants.—Grove Farm, Great Doddington, Nr. Wellingborough (July 21st); Ashton Estate, Oundle, Peterborough (July 26th).

Roxburghshire.—Fairnington, Kelso (July 25th).

Somersetshire.—Knights Farm, Crimchard, Nr. Chard (July 18th); Portfield Farm, Curry Rivel, Langport (July 21st).

Suffolk (E.).—Oak Tree Farm, Kelsale, Saxmundham; Crouches Farm, East Hoathly, Lewes (July 23rd).

Suffolk (W.).—Siam Hall Farm, Newton, Sudbury (July 26th).

Surrey.—Moor Hawes Farm, Dormansland, Lingfield (July 21st).

Sussex (W.).—Lower Woodhouse, Billingshurst (July 25th).

Wilts.—Southgrove Farm, Burbage, Marlborough; Browham House Farm, Browham, Chippenham (July 25th).

Worcestershire.—Kennels and Slaughterhouse, White House Farm, Suckley (July 18th).

Foot-and-Mouth Disease:

Cumberland.—Beeches Farm, Thurstonfield, Carlisle (July 19th); Knell's Hill Field, Houghton, Carlisle (July 21st); The Croft, Aglionby (July 24th); Newlaithes Farm, Carlisle (July 25th).

Dumfriesshire.—Broom Rigg Field, and Lower Portract, Holywood, Dumfries (July 20th); Broomhouses, Lockerbie; Slaethorne Croft, New Bridge; Sandbed, Kirkmahoe, Dumfries (July 21st); Portrack House and Bellfield Farm, Holywood; Annefield Farm and Rorie Farm, Tinwald (July 24th); Guillyhill, Newbridge (July 25th); Gateside of Isle, Auldgirth (June 25th).

Kent.—Wye Court Farm, Wye, Ashford (July 23rd); Coningbrook Farm, Willesborough, and Homelea Farm, Kennington, Ashford (July 25th).

Fowl Pest:

Hunts.—Olde Tiles, Honey Hill, Fenstanton (July 23rd).

Isle of Ely.—18, Wimblington Road, Doddington, March (July 21st); Poultry Paddock, Cooks Green, Doddington, March (July 23rd).

Warwicks.—Durham House, Keresley, Coventry (July 21st); Nether Wood Lodge Farm, Chadwicke End, Birmingham (July 22nd); Durham House, Keresley, Coventry (July 26th).

Swine Fever:

Derbys.—Step Farm, Bright Street, North Wingfield, Chesterfield (July 25th).

Hants.—Headley Mill Farm, Headley, Nr. Benden (July 24th).

Lincs (Kesteven).—Meadow Road, Langtoft, Peterborough (July 21st).

Salop.—Adcote Mill, Little Ness, Baschurch, Shrewsbury (July 21st); 1, Acton Burnell, Nr. Shrewsbury (July 23rd).

Staffordshire.—Clay Street, Penkridge, Stafford (July 22nd).

Warwicks.—43, Rowley's Green Lane, Longford, Coventry (July 25th).

Yorks (W.R.).—553, Wyke Lane, Bradford (July 21st); 94, Old Lane, Birkenshaw, Bradford (July 25th).

The Second International Congress of Physiology and Pathology of Animal Reproduction and of Artificial Insemination

COPENHAGEN: JULY 7TH-11TH, 1952

Thirty-nine different countries were represented in Copenhagen for the second meeting of this truly International Congress, at which the British Veterinary Association was represented by Mr. S. L. Hignett, of Frant. The Royal Veterinary and Agricultural College acted as hosts and the gratitude of all those present was expressed to the Principal, Professor N. Thorkil-Jensen, for the excellent facilities provided. Most of the organisation of the Congress, which was no small feat, fell on the shoulders of Professor Ed. Sorensen, who as Secretary General kept the programme running with clockwork-like precision, but at the same time in a very personal manner. He was ably supported by his staff of Danish veterinarians and the College Staff and every member had unqualified praise for their fine efforts.

Following a warm welcoming on the Sunday by the City of Frederiksborg, in whose province the College is situated, the Congress was officially opened on Monday. At this ceremony, the Danish Minister of Agriculture, Jens Sonderup, welcomed delegates, and Dr. John Hammond, the well-known President of the Congress, ably expressed the appreciation of the members.

The President, on behalf of the members, sent a telegram to King Frederik of Denmark, who was then *en route* to Greenland, conveying their humble respects and good wishes for his journey.

The following days were well filled with scientific papers of a diverse and stimulating nature, many British veterinarians participating as essayists. Aspects as varied as the deep freeze technique of spermatozoa and *Vibrio foetus* infection were discussed. Nearly all the papers were followed by a lively debate and such discussions were often continued individually long after the official meeting had ended.

The social amenities of Copenhagen are well known and to these had been added others of a more specialised nature for the members of the Congress.

On Tuesday evening the students of the College entertained members to an informal dance in the grounds of the College. The weather, which was perfect throughout the stay, added to this evening's enjoyment of beer, sausages, dancing and more informal discussions.

The following day was spent visiting farms and Frederiksborg Castle, and gave most members their first opportunity to view Danish agriculture in action. In the evening, a reception in the Town Hall of Copenhagen was given to members and to members of the Sixth Congress of Animal Husbandry. The amenities and the generosity of the town were magnificent and this reception was one of the high-lights of the whole tour.

Thursday was devoted to papers, mainly on *V. foetus* infection, and a mid-day visit to the Carlsberg Breweries: the contributions to discussions in the afternoon were noticeably more loquacious than hitherto! The welcome arrival of Sir Thomas Dalling as an addition to the British contingent was noted on Thursday. This was the final day of the proceedings of the Congress and the following day, Friday, members were invited to the inaugural meeting of the Sixth International Congress of Animal Husbandry.

A reception at the " Bellahoj " Agricultural Show in the afternoon gave members an opportunity to see at close quarters some of the finest of Denmark's many fine animals. The highly productive Red Danish cows, the magnificent horses of all types, from the heavy cart horse to the light, attractive, Icelandic pony, all gave some idea of the great importance of agriculture to Danish economy.

This enjoyable excursion was followed by a concluding meeting at the College and an evening banquet in the superlative style which is always associated with Danish wining and dining.

It was a fitting end to what, to all, had been a delightful stay in a friendly, hospitable and charming country. Those of us fortunate enough to be invited into Danish homes realised that this hospitality was both deep and sincere. The generosity of the Danish veterinarians has done much to strengthen the bonds of veterinary science, international goodwill and scientific co-operation to which the whole Congress has made such an excellent and far-reaching contribution.

F. A. E.

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ANIMAL DISEASES RESEARCH ASSOCIATION

ANNUAL MEETING AT MOREDUN INSTITUTE

The annual meeting of the Association was held at Moredun on July 16th, 1952, under the chairmanship of the President, Mr. G. G. Mercer, C.B.E. There was a large attendance.

Dr. Russell Greig, Director of the Institute, in submitting his annual report first discussed the proposed extensions to the Institute. Arrangements for the building of a second range of sheep houses were now well under way and a new Department of Parasitology would shortly be added to the resources of the Association. The Department would be under the immediate supervision of Dr. J. Allan Campbell, B.A., M.R.C.V.S. Dr. Campbell was an established authority on the sheep tick and as Technical Secretary of the Hill Farm Research Committee he had intimate knowledge on a wide range of matters concerning hill sheep husbandry. The buildings to house the Parasitological Unit and also separate buildings for a refectory would be commenced as soon as circumstances permitted.

Dr. Greig then discussed the present position of research on enzootic abortion in ewes and indicated briefly the results of field trials designed to test the protective value of an experimental vaccine. The number of animals under test was over 21,000 and the results had proved definitely encouraging.

The Association's research on scrapie was also briefly described. Some years ago the Association determined the cause of the disease as a virus. The virus had been studied with the primary aim of attaining one or both of two objects—a safe and effective protective vaccine and an efficient, reliable blood test that could be employed in detecting latent cases of the disease. The achievement of these would provide the means of accomplishing their ultimate object—the eradication of scrapie from this country.

Dr. Russell Greig said that while they had been investigating the diseases of farm animals for a long time they had, oddly enough, forgotten and thus neglected one of the most important farm animals—the sheep-dog. He had therefore projected a wide survey of the conditions, feeding and management of sheep-dogs, particularly in the hill districts. The questionnaire on which the survey was based was issued in the English and Welsh languages. He had been able to obtain the " case histories " of 700 sheep-dogs. The results indicated that the sheep-dog's ration while adequate in calories was ill-balanced and deficient in certain important elements, the lack of which could be made good by a simple and inexpensive supplementary ration. It was proposed to publish the results of the investigation at an early date.

Dr. James Stewart, Chief of the Biochemistry Department, discussed the hypomagnesaemias, particularly lactation tetany in cows. He also referred to the fact that recently a condition of hypomagnesaemia in the ewe had appeared as a " new disease " and had very markedly increased during the last two years. The preventive value of feeding magnesium-rich mineral mixtures was emphasised.

Sir Patrick Laird, Secretary of the Department of Agriculture for Scotland, in discussing the research achievements of Moredun, said that during the last 20 or 30 years the research work had effected savings to the State which must be reckoned in terms of several million pounds sterling.

Mention was made of the fact that Dr. D. R. Wilson and Mr. William Buist, chief animal attendant, had each served the Association for a quarter of a century and each, in his own sphere, had rendered quiet, loyal and splendid service.

DISEASES OF ANIMALS ACT, 1950—GREAT BRITAIN

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Parasitic Mange	Sheep Scab	Swine Fever
16th to 30th June, 1952	12	43	7	—	—	27
Corresponding period in—						
1951	10	—	18	—	—	50
1950	12	—	6	—	—	14
1949	4	—	36	—	—	—
1st Jan. to 30th June, 1952	274	408	121	—	1	557
Corresponding period in—						
1951	260	18	494	—	4	478
1950	211	14	87	—	19	22
1949	100	11	285	—	28	5

Tuberculosis (Attested Herds) Schemes

The number of Attested Herds, *i.e.*, herds officially certified as free from Tuberculosis as at June 30th, 1952, was as follows:—

England	Wales	Scotland	Total (Great Britain)
41,448	23,922	19,495	84,865